THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY.

[SIXTH SERIES.]

No. 3. MARCH 1888.

XX.—*On a Collection of Reptiles from China.*

By Dr. A. Günther, F.R.S.

[Plate XII.]

Mr. A. E. Pratt, who is engaged in exploring for Mr. J. H. Leech the entomological fauna of the interior of China, has availed himself of the opportunity thus afforded him of collecting the reptiles and fishes of the country near Kiu Kiang, on the Yantsze river. The reptiles were collected in the mountains north of Kiu Kiang. Like all Chinese collections formed at a distance from the coast-line, at some well ascertained locality, the present is a valuable contribution to our knowledge of this fauna. The general features of the reptilian fauna of China are fairly well known; but comparatively few reliable data have been collected which may serve for a more detailed inquiry into the range of the species, and lead to a complete knowledge of the manner in which the tropical fauna gradually merges into that of temperate Asia.

Mr. Pratt, besides, was particularly fortunate in discovering a most interesting new form of Crotaline snake and in rediscovering the genus *Phyllophis*, of which one specimen only was previously known.

1. *Emys Reevesii*, Gray.

The ornamental colours of the soft parts are distributed as follows:—They consist of yellow bands and spots, edged with

black; the most conspicuous is a band running from the upper part of the eye along the upper margin of the neck; sometimes it is interrupted in some part of its course, and generally a continuation of it is visible in front of the eye. A short curved band between the eye and the tympanum, another running from the lower part of the eye to below the tympanum; an oblong spot at the posterior angle of the mandible. Tympanum and posttympanic region with curved streaks and spots. Sides and lower part of the neck with parallel straight bands, posteriorly broken up into series of spots. In very young examples these ornamentations are less numerous.

2. *Trionyx sinensis*, Wiegm.

Three young specimens.

3. *Tachydromus septentrionalis*, Gthr.

Numerous.

4. *Tachydromus Wolteri*, Fisch.

One specimen.

Notes on the Species of Tachydromus.

The lizards of this genus (with the exception of *T. smaragdinus*) resemble one another in general appearance so much as to induce some herpetologists to consider certain characters on which I had based the distinction of the species to be of very doubtful specific value. I think the species can be readily and with certainty distinguished; they are based on characters which in my experience are subject to only exceptional variation, and which, slight as they are, must appear significant enough when they are found to be constant in specimens from the same locality and combined with one or more similarly constant characters.

The late Dr. Stoliczka was the first to refuse specific value to the number of mental scutes and inguinal pores. In his notes on a *Tachydromus* from Sikkim (Journ. As. Soc. Beng. xli. 1872, p. 87), which he identified with the archipelagic *T. sexlineatus* and of which he had twenty-five specimens, he says that he has found four specimens with four chin-shields, the others having three, and one specimen with two inguinal pores, the others having three, four, or five. Such an amount of variation I have not found in any species, although I examined equally large numbers of individuals of several species; and in not a single species have I met

with a variation of the number of the chin-shields *. In all the numerous specimens of *T. septentrionalis* and *T. smaragdinus* the number of inguinal pores is invariable. More especially with regard to the true *T. sexlineatus*, of which I have examined some forty examples †, the number of chin-shields is invariably three and that of inguinal pores very rarely exceeds two; in three specimens (two from Borneo) I have observed one pore only.

What follows from these observations is :—

1st. That the species examined by Stoliczka differs from the other species of the genus in having a greater number of inguinal pores and, therefore, in being liable to more frequent variation in this respect.

2nd. That that species must be distinct from *T. sexlineatus* and had better be distinguished by another name—*T. sikkimensis.*

Specimens of *T. sexlineatus* from Khassya, in the British Museum, have on the whole a somewhat shorter and less tapering snout, also shorter toes than the typical form, and approach in these respects *T. meridionalis.*

This latter species has been placed by Mr. Boulenger ('Lizards,' iii. p. 4) as a synonym of *T. sexlineatus*, but besides being a less slender species, the four specimens have one inguinal pore only, like *T. septentrionalis,* in which the constancy of this character is a remarkable and incontrovertible fact.

Of the five species united by Mr. Boulenger (*l. c.* p. 5) under the name of *T. tachydromoides*, *T. septentrionalis* is the one the distinctness of which from the Japanese form or forms can be least impugned. We have now no less than twenty-seven specimens before us, a most instructive series as to the value of the characters by which this species has been defined. Only two of the specimens, from Shanghai, differ from the others in having a series of small scales intercalated between the outer pair of large scaled series. According to Stoliczka's estimate of the specific characters in *Tachydromus* these two specimens should be relegated to a distinct species; and if this peculiarity should prove to be constant in the form inhabiting that district, I myself should be inclined to separate it from *T. septentrionalis.*

Schlegel figures in the 'Fauna Japonica' his *T. tachydro-*

* One individual of *T. Wolteri* has three on one and four on the other side, which, of course, proves nothing, as in every lizard almost any two contiguous head-shields may be found abnormally confluent.

† Half of this number belong to the Museum of Genoa, having been kindly forwarded to me by the Marquis J. Doria.

moides with three inguinal pores and strongly keeled ventral scutes. I have seen only one specimen from Japan with three pores, but six others possess only two, and their ventral scutes are remarkably smooth, only those on the side of the abdomen being slightly keeled. Duméril and Bibron also do not seem to have observed more than two pores in this or any other species of the genus.

Whether or not *T. amurensis*, Ptrs., is distinct from *T. tachydromoides* must be left uncertain until more materials are collected. I have not seen this form. But I have much less doubt as to the distinctness of *T. Haughtonianus* from *T. tachydromoides*, on account of the considerable difference in the number of transverse series of ventral scutes.

Finally, three specimens of *T. Wolteri* of Fischer show a remarkable agreement in having a single inguinal pore combined with eight dorsal series, which are composed of scales of nearly equal size. One specimen is the type from the Korea, a second forms part of the present collection from Kiu Kiang, and the origin of the third is unknown. The coloration is also identical, the white lateral band being singularly bright and well defined.

Thus I distinguish from the materials at present at my disposal and from the descriptions of authors eight species, which may be shortly characterized as follows :—

I. Three pairs of chin-shields.

A. Dorsal scales in four series.

1. Inguinal pores three to five; ventral scutes in twelve series. *T. sikkimensis*, sp. n. Sikkim.
2. Inguinal pores two (exceptionally one); ventral scutes in ten series ..... *T. sexlineatus*, Daud. Borneo, Java, Birma, Khassya.
3. Inguinal pore one; ventral scutes in twelve series. *T. meridionalis*, Gthr. China.

B. Dorsal scales in eight or nine series, of which the three outer ones on each side are the largest; one inguinal pore. *T. smaragdinus*, Blgr. Loochoo Islands.

C. Dorsal scales in six series, of which the two middle ones contain very small scales, and are represented sometimes by one series only *; one inguinal pore. *T. septentrionalis*, Gthr. Kiu Kiang, Nankin, Ningpo.

---

* In two specimens from Shanghai a series of small scales is intercalated between the outer pair of large scales.

II. Four pairs of chin-shields.

A. Two or three inguinal pores on each side.

1. Three inguinal pores; dorsal scales in eight series, of which the two middle are smaller than the rest.
T. amurensis, Ptrs. Amoorland.

2. Two (three) inguinal pores; dorsal scales in six series, those of the two middle ones smaller than the others; twenty-two or twenty-three in a longitudinal series between the axils ..... *T. tachydromoides*, Schleg., = *T. japonicus*, D. & B. Japan.

3. Two inguinal pores; dorsal scales in six series; twenty-seven in a longitudinal series between the axils.
T. Haughtonianus, Jerd. Assam.

B. One inguinal pore.

Dorsal scales in eight series, subequal in size.
T. Wolteri, Fisch. Corea, Kiu Kiang.

5. *Lygosoma Reevesii*, Gray.

A specimen in the collection has twenty-eight series of scales round the body, and therefore comes nearest to the scink which I have described as *Eumeces modestus*. However, Mr. Boulenger has already stated that the number of series of scales varies in these lizards from twenty-eight to thirty-two *. Like Mr. Boulenger, I am unable to separate these Chinese scinks from the North-American *L. laterale*.

6. *Lygosoma elegans*, Blgr.

One specimen.

7. *Gecko japonicus*, D. & B.

Two specimens.

8. *Calamaria quadrimaculata*, D. & B.

Four adult specimens. Their abdomen is scarlet; all possess a black, median, subcaudal band, which occupies nearly the whole width of the posterior subcaudal scutes, being much narrower anteriorly. Tail very obtuse.

The British Museum possesses also a young specimen from Hongkong.

9. *Simotes chinensis*, sp n.

Scales in seventeen rows. Eight upper labials, the fourth

* Thirty-four series of scales, as stated in the 'Reptiles of British India,' p. 88, for the type of *L. Reevesii*, is an error for thirty-two.

and fifth entering the orbit; loreal square; one præ- and two postoculars; anterior chin-shields in contact with four lower labials. Ventral shields 190, distinctly keeled on the sides; subcaudals 63, anal entire. The ground-colour is a light brownish grey; trunk crossed by thirteen, tail by four narrow, equidistant, black cross bars; these are somewhat broader on the back than on the sides, and indistinctly edged with white. A black band from eye to eye and continued over the fifth and sixth labials. The black arrow-shaped spot on the neck is well defined. Abdomen with numerous square black spots, each occupying one half or the whole of a ventral scute. Subcaudals uniform white.

One young specimen measures $8\frac{1}{2}$ inches, the tail being 2 inches long.

10. *Coluber rufodorsatus*, Cant.

Common.

11. *Elaphis dione*, Pall.

One specimen.

12. *Elaphis sauromates*, Pall.

Nine specimens.

13. *Zaocys dhumnades*, Cant.

Five specimens.

14. *Ptyas korros*, Reinw.

One specimen.

15. *Phyllophis carinata.*

Phyllophis carinata, Günth. Rept. Brit. Ind. p. 295, pl. xxi. fig. B.

The discovery of a second specimen of this singular type settles the question as to its habitat. Both specimens agree in every respect; but in the new specimen a fine brown line begins to be visible in the second half of the body between the third and fourth outer series of scales, disappearing near the root of the tail. A pair of similar lines run along the back of the tail. A series of black spots on each side of the abdomen is formed by very small specks, one on each side of each abdominal scute.

16. *Cyclophis major*, Gthr.

Seven specimens.

17. *Tropidonotus annularis*, Hallow.

Common.

18. *Tropidonotus tigrinus*, Boie.

Very common.

19. *Ophites septentrionalis*, Gthr.

One specimen.

20. *Lycodon rufozonatus*, Cant.

Common.

21. *Bungarus semifasciatus*, Kuhl.

One specimen.

22. *Callophis annularis*, Gthr.

One specimen.

23. *Halys Blomhoffii*, Boie.

Common.

24. *Halys acutus*, sp. n. (Pl. XII.)

This new species may be at once recognized by the upper part of the extremity of the snout being produced into a short, flexible, pointed lobe which projects from between the anterior frontal and the rostral shield. The anterior frontals are small, longer than broad; the posterior very large, intermediate in size between the anterior frontals and the occipitals. Eye surrounded by a ring of small orbitals, of which those in front are rather elongate; that below the eye is likewise long and crescent-shaped, separated by a small postocular from the superciliary shield. Seven upper labials, of which the second forms the anterior wall of the antorbital pit, the third and fourth being the largest. A series of three large temporal shields occupies the lower part of the temple, the space between this series and the occipital being covered by ordinary scales.

Scales strongly keeled, the keels forming a high sharp ridge on the posterior part of the body. Each scale bears, besides the keel, on its extremity a pair of very small nodules; scales in twenty-one rows. Ventral shields 160; anal entire; subcaudals 60, of which the six or twenty anterior may be single. Extremity of the tail compressed, covered with comparatively large vertical scutes, and terminating in a long and compressed spine.

The colour of the upper parts is brown, each side of the body being ornamented with a series of large dark-coloured triangles, the point of each triangle meeting that of the other side in the median line of the back. Lower parts whitish, with a series of large rounded black spots on each side and smaller ones of irregular shape in the middle. The upper part of the head is uniform black; a sharp line, which runs from the eye along the middle of the temporal scutes to the angle of the mouth, dividing the black coloration of the upper parts from the white of the lower.

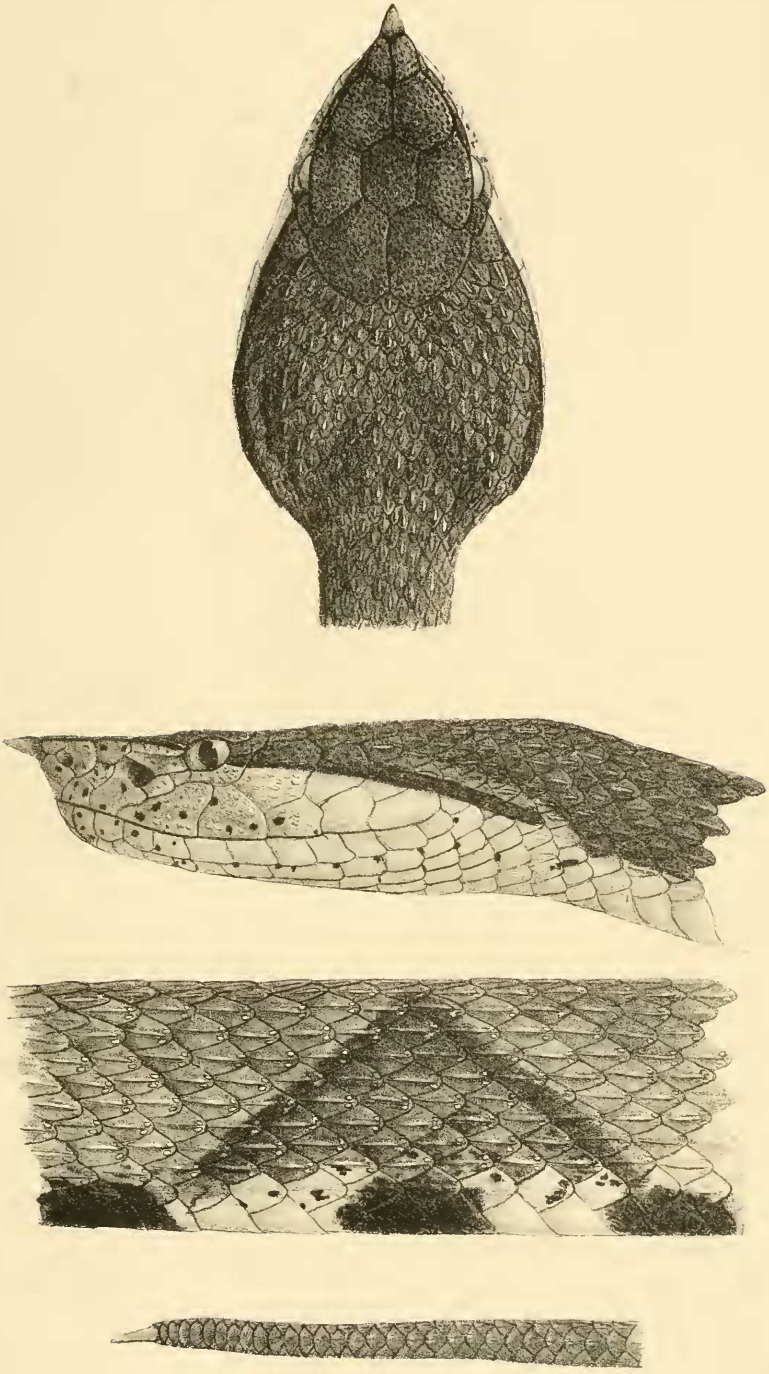
This species is very remarkable not only on account of the rostral lobe, but also for the modification of the scutellation of its compressed tail. Although this modification cannot in any way be taken as an initial step in the development of the rattle of *Crotalus*, the rattle being a modification of the last dermal scute only into which the vertebral column is not prolonged, yet the tail of this species may exercise in a much smaller degree the same function as in the rattlesnake, and may be an instrument by which vibrations and sound are produced. It is well known also that many innocuous snakes are able to vibrate the extremity of their tail. To judge from its size and from the development of its poisonous apparatus this snake must be extremely dangerous.

Three specimens are in the collection, of which the largest is 46 inches long, the tail measuring 6½ inches.

XXI.—*On two new Genera allied to* Loftusia, *from the Karakoram Pass and the Cambridge Greensand respectively.* By H. J. Carter, F.R.S. &c.

[Plate XIII.]

In the month of December, 1887, Mr. W. Theobald, M.R.A.S., late Deputy Superintendent, Geological Survey of India, submitted for my examination six of the fossils commonly called "Karakoram stones," which were brought from the "Karakoram Pass," in the Karakoram range of mountains, North-east Kashmir, where they were collected by the late Dr. F. Stoliczka. Five of these are undoubtedly *Parkeriæ*; but the other, of which, unfortunately, there is only half, is totally different, and so very like *Loftusia* in composition, although not in form and structure, that (as will be seen hereafter) I have allied it to the latter and proposed for it the



R. Mintern del. et lith.

Mintern Bros. imp.

Halys acutus.